

**Preferred Alternative Selection Memorandum**  
**For**  
**The National Bio and Agro-Defense Facility (NBAF)**

**Reviewed by:**

Signed: Nicole Marcson Dated: 12/3/08  
Ms. Nicole Marcson, Assistant General Counsel for Science & Technology  
DHS, Office of the General Counsel

Signed: James Johnson Dated: 12/3/08  
Mr. James Johnson, Chair, Steering Committee  
DHS, S&T, Office of National Laboratories

**Approved By:**

Jay M. Cohen  
Jay M. Cohen  
Decision Authority  
Under Secretary for Science and Technology  
Department of Homeland Security

DEC 4, 2008  
Date

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## Summary of Decision

The National Environmental Policy Act (NEPA) requires federal agencies to examine the environmental impacts of their proposed actions before decisions are made. DHS is considering an action to site, construct, and operate the proposed National Bio and Agro-Defense Facility (NBAF) to comply with Homeland Security Presidential Directive 9/HSPD-9 “Defense of United States Agriculture and Food” by providing an enhanced domestic research capability on foreign animal diseases and zoonotic diseases. Accordingly, DHS analyzed its proposed action in a Draft Environmental Impact Statement (EIS) and a Final EIS, prepared in accordance with NEPA, as amended (42 U.S.C. 4321, et seq.), the Council on Environmental Quality’s “Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act” (CEQ Regulations at 40 CFR, Parts 1500-1508), and DHS Management Directive 5100.1 “Environmental Planning Program”. The CEQ Regulations require an agency to identify a Preferred Alternative in its Final EIS (40 CFR 1502.14). The Preferred Alternative is the alternative that the agency believes would fulfill its statutory mission, giving consideration to environmental, economic, technical, and security factors. As the Decision Authority for the proposed action, I select the Manhattan Campus Site in Kansas as the Preferred Alternative for identification in the NBAF Final EIS.

Identification of a Preferred Alternative in an EIS does not guarantee that such alternative will be the final alternative selected in the agency’s Record of Decision (ROD). Rather, selection of the Preferred Alternative serves to put the public on notice as to which alternative the agency currently favors. The ROD, signed at least 30 days after the Notice of Availability (NOA) for the NBAF Final EIS is published in the *Federal Register*, documents the agency’s final chosen alternative. The ROD will be published in the Federal Register and will address the following:

- The decision of whether or not to build and NBAF and, if so, where it will be built;
- Discussion of factors involved in deciding if and where the NBAF will be built, including considerations of national policy, evaluation criteria, threat and risk assessment, costs, site characterizations, security, and other programmatic requirements;
- Discussion of the alternative sites considered in the EIS in relation to the technical information developed during the EIS process, specifying how the alternative sites compare with the environmental criteria studied; and
- Discussion as to whether all practicable means to avoid or minimize environmental impacts from the alternative selected have been adopted and, if not, why, as well as any required mitigation, monitoring, and enforcement programs that would be necessary to offset environmental impacts.

Selection of the Preferred Alternative is based upon: 1) the site’s ability to satisfy the evaluation criteria published in the “Public Notice Soliciting Expressions of Interest (EOIs) for Potential Sites for the NBAF” (which was published in the Federal Register on January 19, 2006); 2) the site’s ability to satisfy the preferences communicated to all second round potential NBAF sites

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(by letter dated December 8, 2006); 3) offers to offset site infrastructure costs (submitted to DHS by March 31, 2008); 4) the environmental impacts identified in the NBAF EIS; and 5) information contained in the Threat and Risk Assessment, Site Cost Analysis, Site Characterization Study, and Plum Island Facility Closure and Transition Cost Study reports.

The Preferred Alternative selection process was an integrated assessment and evaluation of each site's strengths, weaknesses, and risks against DHS's evaluation criteria and preferences while considering the environmental effects and security findings. This memorandum documents the basis for my decision.

## Background

To comply with Homeland Security Presidential Directive 9/HSPD-9 "Defense of United States Agriculture and Food," the DHS Science & Technology (S&T) Directorate engaged in analysis of the capabilities of research facilities supporting homeland security. The development of an integrated, national bio and agro-defense strategy revealed that the Nation's current national bio and agro-defense capabilities are inadequate to meet future research requirements supporting both agricultural and public health national security. Foreign animal disease studies, public health threats from emerging, high-consequence zoonotic pathogens, and the need for development and licensure of medical countermeasures have generated additional demands for biocontainment laboratory space. Current laboratory space available in the United States is not sufficient to support the increasing levels of research, development, and testing needed to meet the growing concerns about accidental or intentional introduction of foreign animal diseases into this country. Additional capability and capacity are also needed for high-consequence zoonotic disease countermeasures research and development (R&D) and medical countermeasure testing and evaluation.

DHS is evaluating potential sites for a proposed new national R&D asset, the NBAF, which is in the planning phase. The proposed facility size will be approximately 500,000 square feet and its site will require a minimum of 30 acres. The Office of National Laboratories (ONL), within the S&T Directorate, is the office responsible for project development and construction.

During the first round site down-select in 2006, DHS conducted an initial evaluation of the 29 EOIs received using the four evaluation criteria set forth in the *Federal Register* public notice soliciting EOIs. The four evaluation criteria were:

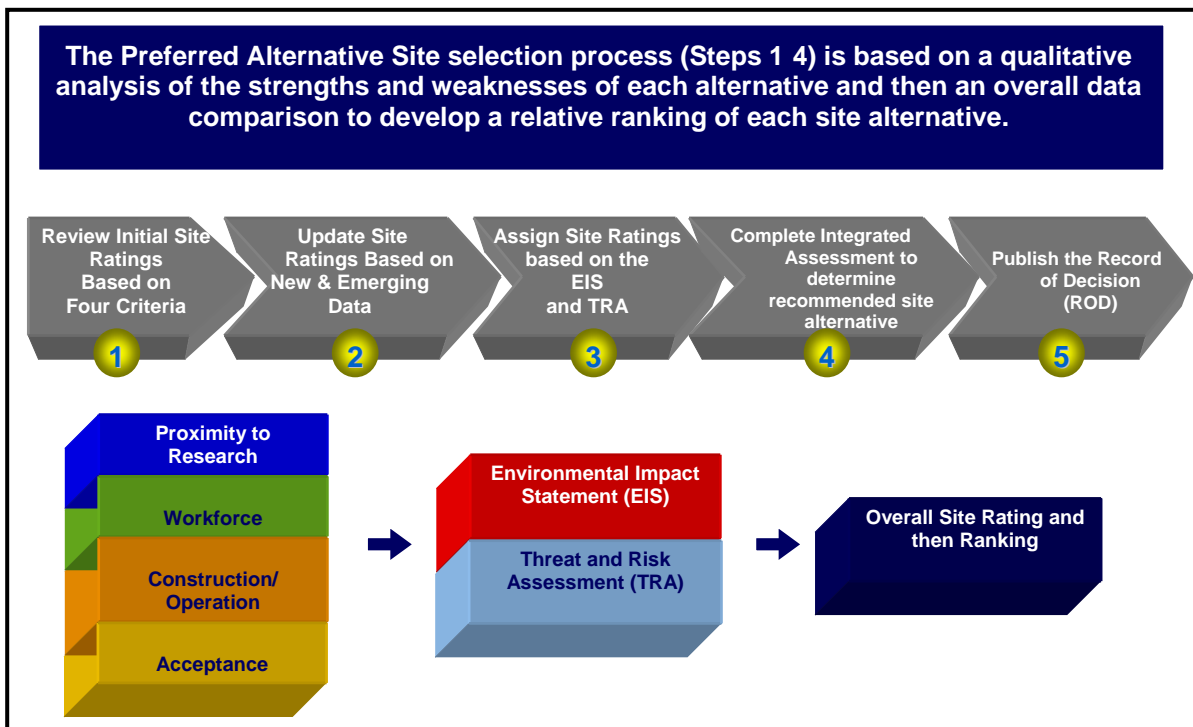
- Proximity to Research Capabilities
- Proximity to Workforce
- Acquisition/Construction/Operations (ACO) Requirements
- Community Acceptance

An interagency working group developed the evaluation criteria to ensure that the NBAF would meet the interdependent needs of DHS and USDA to adequately protect the nation against

biological threats to animal agriculture. Based on this initial evaluation, 18 sites were identified for further analysis in the second round of the selection process in August 2006.

DHS set forth the review process for analyzing the remaining 18 sites against the evaluation criteria, associated sub-criteria, and preferences. The preferences, communicated by letter dated December 8, 2006, were elaborations of the DHS view of the importance of the four evaluation criteria and sub-criteria. Following this review, six sites were selected to represent the range of reasonable action alternatives for analysis in the EIS, including Plum Island, New York. The *July 2007 Final Selection Memorandum for Site Selection for the Second Round Potential Sites for the NBAF* and the *Plum Island Memorandum for the Record* documented the findings of this process and established the evaluation criteria baseline.

DHS then developed and implemented a decision process to identify a Preferred Alternative in the Final EIS. A Steering Committee, comprised of Federal employees with subject matter expertise from DHS and USDA, led the evaluation process and made recommendations to the DHS Decision Authority. The process involved a qualitative analysis of the strengths and weaknesses of each action alternative and then an overall data comparison to develop a relative ranking of each action alternative. The steering committee considered the No Action Alternative and weighed it against the proposed action of constructing and operating the NBAF at the highest ranked site alternative to identify the Preferred Alternative.



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The Steering Committee updated the original findings from the second round down-select of each action alternative using new and emerging data collected since July 2007. This data was contained in the following support documents<sup>1</sup>:

- Threat and Risk Assessment, designated as For Official Use Only (FOUO)
- Site Cost Analysis
- Site Characterization Study
- Plum Island Facility Closure and Transition Cost Study

Additionally, DHS requested each consortium submit an offer, by March 31, 2008, for offsets to the site infrastructure costs. The decision to offer land, funds, or other assets was solely at the discretion of the consortium. The amount of the contribution and how the contribution was funded (e.g., bonds, taxes) was determined by the consortium and/or the state and local government officials.

The Steering Committee then considered the environmental impacts presented in the EIS, including the public comments made at the public meetings and during the 60-day public comment period, along with the Threat and Risk Assessment. Finally, overall site ratings were completed followed by the ranking of the sites to determine the recommended action alternative. The Steering Committee then considered the No Action Alternative and weighed it against the proposed action of constructing and operating the NBAF at the highest ranked site alternative to identify the recommended Preferred Alternative. Following a comparison of the action alternative to the no action alternative, the steering committee unanimously agreed to the preferred alternative. The next section documents the findings of the Steering Committee and the basis for my decision.

## Preferred Alternative

The chart below graphically expresses the Steering Committee's updated findings and recommendations regarding each alternative's ability to satisfy the evaluation criteria, the threat and risk assessment, the environmental impacts, and their overall rating and ranking.

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<sup>1</sup> Support documents (except for the TRA since it is designated FOUO) were posted on DHS's NBAF Web site (<http://www.dhs.gov/nbaf>) in August 2008

	Preferred Alternative					
	Manhattan, KS	San Antonio, TX	Athens, GA	Flora, MS	Butner, NC	Plum Island, NY
<i>Step 1: Review Initial Site Ratings based on Four Criteria</i>						
<i>Step 2: Evaluation Criteria Ratings</i>						
PROXIMITY TO RESEARCH CAPABILITIES	G	Y	Y	R	G	Y
PROXIMITY TO WORKFORCE	Y	G	Y	R	G	Y
ACQUISITION / CONSTRUCTION / OPERATIONS	G	Y	Y	G	R	Y
COMMUNITY ACCEPTANCE	G	G	Y	G	R	R
<i>Step 3: TRA and EIS Ratings</i>						
THREAT AND RISK	Y	Y	Y	Y	Y	Y
ENVIRONMENTAL IMPACTS	G	G	Y	G	G	G
<i>Step 4: Overall Site Rankings</i>						
Overall Rating	G	Y	Y	R	R	R
Overall Ranking	1	2	3	4	4	4

**Step 2 and 4 Rating Legend**

G Clearly Meets Overall Criteria

Y Partial Fulfillment of Overall Criteria

R Does Not Meet Overall Criteria

**Step 3: TRA Rating Legend**

G No Security Risks

Y Acceptable Security Risks with or without mitigation

R Unacceptable Security Risks

**Step 3: EIS Rating Legend**

G No to Minor Environmental Impacts

Y Moderate Environmental Impacts

R Significant Environmental Impacts

I note that the Steering Committee found that the EIS and the Threat Risk Assessment (TRA) offered very little differentiation between the sites. In fact, the EIS stated that the risk of release of a biological pathogen from the NBAF was independent of where the NBAF was located. The Steering Committee determined that, based on its review of the EIS, the likelihood of a release of a biological pathogen was very low, given appropriate attention to the design, construction, and operation of the NBAF with an array of safety controls. The Steering Committee further determined that the risk of release of any identified pathogen proposed for study within the NBAF (in addition to foot and mouth disease (FMD)) could be mitigated by implementation of operational protocols, rigid security measures, and adherence to the U.S. Government bio-security guidelines. With respect to the economic consequence if a release were to happen, the Steering Committee found that the major impact of a release was due to the loss of meat export trade status upon a release of FMD and that this is independent of the site. Further, following my visit to the World Organization for Animal Health (OIE), I received a letter dated November 24, 2008 from Dr. Bernard Vallat, The Director General, stating the following: “regardless of where in the territory of a country an outbreak of FMD occurs, the FMD status of the country is lost immediately upon the first notification to the OIE. The difference, in terms of the national impact of this outbreak, is more related to how the country’s authorities respond to the incursion, rather than where the outbreak occurs.” I therefore determined, based on the lack of site differentiation of the risk of a release and the economic consequences of a release, that it was most important to select a location that would optimize the capability to diagnose and cure large animal diseases. Furthermore, the Steering Committee found that the environmental impacts analyzed in the EIS and the site specific threats were all very similar and that there were only minor differentiators that could be found. Therefore, the key differentiator among the sites was the original four

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evaluation criteria. Because this facility is intended to be the Nation's preeminent research facility for foreign animal and zoonotic disease research, the site's proximity to research capabilities that can be linked to NBAF mission requirements was emphasized among the four evaluation criteria.

## ***Preferred Site Alternative***

### ***Heartland BioAgro Consortium, Manhattan, KS (Manhattan Campus Site)***

Based on an evaluation of all of the alternatives, the Steering Committee determined that the Manhattan Campus Site clearly possessed more strengths and fewer weaknesses than any other alternative and best met the purpose and need to site, construct, and operate the NBAF. Specifically, its location near Kansas State University (KSU) provides site proximity to existing research capabilities that can be linked to NBAF mission requirements. Additionally, the site's proximity to the KSU College of Veterinary Medicine, KSU College of Agriculture, and the Biosecurity Research Institute is relevant to the NBAF mission and a significant strength. The EIS demonstrated that construction and operation of the NBAF at the Manhattan Campus Site would be environmentally acceptable as almost all environmental impacts fell into the "no impacts to minor impacts" category. As stated in the EIS and agreed to by the Steering Committee, the risk of release of a pathogen was independent of where the NBAF was located. The findings for the Manhattan Campus Site in the Threat and Risk Assessment were found to be comparable to the other Site Alternatives. The Manhattan Campus Site alternative demonstrated very strong community acceptance from local, state, and Federal officials and stakeholders. Additionally, the consortium offered a substantial, unconditional offset package, including use of the existing Biosecurity Research Institute. Taking into consideration the offsets to infrastructure costs and "in-kind" contributions offered by the consortia, the Manhattan Campus Site is among the least expensive location to construct and operate the NBAF. Following a comparison of this site to the no action alternative, the Steering Committee unanimously agreed that the Manhattan Campus Site is the preferred alternative and I concur with the Steering Committee's recommendation.

## **Other Alternatives**

### ***Texas Biological and Agro-Defense Consortium, San Antonio, TX (Texas Research Park)***

While the Texas Research Park Site demonstrated numerous strengths against the evaluation criteria, the Steering Committee found that it did not best meet the purpose and need to site, construct, and operate the NBAF based on the Research and ACO criteria. While a strength is the site's proximity to other research entities, such as a BSL-4 laboratory and several BSL-3 laboratories, which could foster research collaboration, this strength is tempered by the fact that no Veterinary School or College of Agriculture is nearby. Site proximity to workforce is a strength as there is a strong military veterinary infrastructure which possesses significant

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worldwide experience with exotic animal diseases. The Texas Research Park Site also demonstrated very strong community acceptance from local, state, and Federal officials and stakeholders. However, the rating for the ACO criterion was not as strong or competitive as the Manhattan Site. While the Texas consortium offered a very good offset package, only a small percentage of this package was unconditional and could be used as a direct offset to the project cost. The EIS demonstrated construction and operation of the NBAF at the Texas Research Park Site would be environmentally acceptable as the impacts fell in the “no impacts to minor impacts” category. Finally, the findings for the Texas Research Park Site in the Threat and Risk Assessment were found to be comparable to the other Site Alternatives. Therefore, based on the site’s lack of proximity to a Veterinary School or College of Agriculture and the lack of a competitive offset package, I did not select the Texas Research Park Site as the preferred alternative.

### ***Georgia Consortium for Health and Agro-Security, Athens, GA (S. Milledge Ave.)***

While the South Milledge Avenue Site demonstrated numerous strengths against the evaluation criteria, the Steering Committee found that it did not best meet the purpose and need to site, construct, and operate the NBAF based on the Research, Workforce, ACO, and Community Acceptance criteria. This site offers proximity to world class capabilities across disciplines related to the NBAF and collectively there is significant expertise in research on infectious diseases and pathogenesis of animals and humans, as well as zoonoses. However, there is no clear evidence of integration with the biomedical research community and the research focus tends to be on poultry. It is attractive that the area is rich in high containment laboratory building expertise. Additionally, the Emory BSL3/4 laboratories and Athens Community College offered training programs for NBAF workers. The EIS demonstrated that for the South Milledge Avenue Site, almost all environmental impacts fell in the “no impacts to minor impacts” category. However, the NBAF EIS stated the site may require an amendment to the Athens-Clarke County Comprehensive Plan based on the current planned use for the area where it is located. The rating for the ACO criterion was further weakened because the offset package offered by the consortium offset only a small percentage of the project cost. The site continued to experience strong federal level, state, and local political support, however the group For Athens Quality of Life (FAQ) is a well organized, vocal opposition, and expressed numerous concerns on siting the NBAF in Athens, Georgia. Additionally, numerous negative comments about the project were received at public meetings. The findings for the South Milledge Avenue Site in the Threat and Risk Assessment were found to be comparable to the other Site Alternatives. Based on the lack of proximity to NBAF related research and workforce in comparison to the preferred alternative, the active community opposition, and the lack of a competitive offset package, I did not select the South Milledge Avenue Site as the preferred alternative.

### ***The Gulf States Bio and Agro-Defense Consortium, Madison County, MS (Flora Industrial Park)***

While the Flora Industrial Park Site demonstrated numerous strengths against the evaluation

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criteria, the Steering Committee found that it did not best meet the purpose and need to site, construct, and operate the NBAF based on the Research and Workforce criteria. The NBAF Steering Committee concluded the MS consortia's inclusion of Battelle would not offset the Flora Industrial Park Site's lack of proximity to a critical mass of research institutions, such as the lack of a veterinary school and other research institutions in Jackson, inhibiting its ability to synergize other research efforts with NBAF. While Battelle has strong in-house training programs for laboratories and animal research and would assist in bringing these training programs and expertise to NBAF, this strength does not overcome the lack of a nearby university or research institution with related mission areas nor the lack of nearby BSL-3 laboratory with related mission areas. The Flora Industrial Park Site demonstrated a very strong community acceptance from local, state, and Federal officials and stakeholders. Further, the consortium offered a competitive offset package that covered a significant portion of the project cost and made this site one of the least expensive upon which to build. The EIS demonstrated that for the Flora Industrial Park Site, almost all environmental impacts fell in the "no impacts to minor impacts" category. The findings for the Flora Industrial Park Site in the Threat and Risk Assessment were found to be comparable to the other Site Alternatives. However, based on the lack of proximity to NBAF related research and workforce in comparison to the preferred alternative, I did not select the Flora Industrial Park Site as the preferred alternative.

### ***North Carolina Consortium for the NBAF, Granville County, NC (Umstead Research Farm)***

While the Umstead Research Farm Site demonstrated numerous strengths against the evaluation criteria, the Steering Committee found that it did not best meet the purpose and need to site, construct, and operate the NBAF based on the ACO and Community Acceptance criteria. A significant strength is the critical mass of intellectual and scientific capital (comprised of universities, the private sector, and pharmaceutical and biotechnology companies) all within proximity to the site and that can be linked to NBAF mission requirements. Three area universities (Duke University, University of North Carolina, and North Carolina State University) offer significant opportunities to draw and train a skilled workforce. Additionally, the biomanufacturing firms and biotechnology research and development programs within the area, coupled with 24 BSL-3's, provide a strong base for a skilled workforce. However, the Umstead Research Farm Site experienced strong local opposition to the NBAF with limited federal, state, and stakeholder support. The well-organized and vocal opposition group to the NBAF grew to such a level that some federal and state level representatives withdrew their original support for the project. Additionally, numerous negative comments about the project were received at public meetings. The North Carolina rating was not competitive for the ACO criterion because the NC consortium offered minimal offsets to site costs. The EIS demonstrated that for the Umstead Research Farm Site almost all environmental impacts fell in the "no impacts to minor impacts" category. The findings for the Umstead Research Farm Site in the Threat and Risk Assessment were found to be comparable to the other Site Alternatives. However, based on the concern for the active community opposition in addition to the limited federal, state, and local political support and the lack of a competitive offset package, I did not select the Umstead Research Farm Site as the preferred alternative.

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## ***Plum Island, NY (Plum Island Site)***

While the Plum Island Site demonstrated numerous strengths against the evaluation criteria, the Steering Committee found that it did not best meet the purpose and need to site, construct, and operate the NBAF based on the Research, Workforce, ACO, and Community Acceptance criteria. The NBAF Steering Committee concluded that even though the Plum Island Animal Disease Center (PIADC) has demonstrated the ability to effectively carry out its Foreign Animal Disease (FAD) research mission, the research is focused primarily on foot and mouth disease (FMD) (compared to the broader NBAF research mission requirements) and there is a lack of proximity to medical and veterinary schools as well as BSL-3/4 laboratories with related mission areas. While the current PIADC staff has experience with large animal research, there would still need to be a significant amount of training for working in BSL-4 spaces. Additionally, even though there would be a lower cost and risk to relocate research programs from the PIADC facility to the NBAF, if the NBAF were to be constructed on Plum Island, these cost savings would be overshadowed by the much higher construction cost at the Plum Island site. There is strong political opposition at federal, state, and local levels to having BSL-4 research on Plum Island. The EIS demonstrated that for the Plum Island Site almost all environmental impacts fell in the “no impacts to minor impacts” category. The findings for the Plum Island Site in the Threat and Risk Assessment were found to be comparable to the other Site Alternatives. Additionally, I found during a November 2008 visit to the World Organization for Animal Health (OIE) that today, a FMD virus outbreak on an island would be considered no different from an FMD virus outbreak on the mainland with respect to the impact such an outbreak would have on the Nation’s meat export trade status and that, therefore, it was most important to optimize the facility to diagnose and cure large animal diseases. Accordingly, based on the lack of proximity to NBAF related research and workforce in comparison to the preferred alternative, the local public and political opposition to a BSL-4 laboratory on Plum Island, and the significant cost to build and operate on Plum Island, I did not select the Plum Island Site as the preferred alternative.

## **Conclusion**

I recognize the extraordinary amount of hard work and dedication that each consortium demonstrated throughout this highly competitive process. As the Decision Authority, I selected the Manhattan Campus Site in Kansas as the Preferred Alternative because I determined it offered the best overall benefit to the Government based upon DHS’s evaluation criteria and DHS preferences, and met the intended purpose and need to successfully site, construct, and operate the NBAF with minimal environmental impacts.